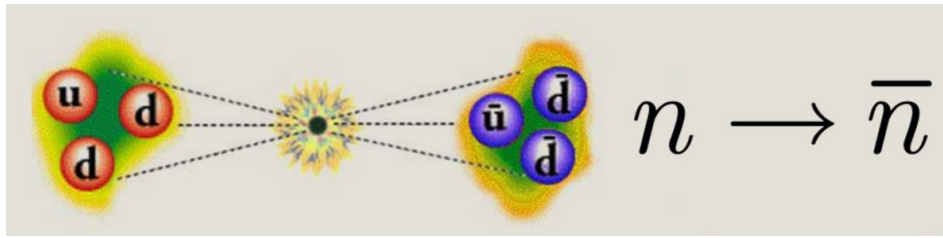


Theoretical Innovations for Future Experiments Regarding Baryon Number Violation, Part 1



Contribution ID: 16

Type: **Oral Presentation**

Neutrons at ORNL and ESS: A Synergistic Program

Wednesday, August 5, 2020 1:00 PM (30 minutes)

Oak Ridge National Laboratory has some of the world's most advanced neutron sources, the High Flux Iso-
tope Reactor (HFIR) which is a continuous source of neutrons from nuclear fission, and the Spallation Neutron
Source, a pulsed source created by an accelerated proton beam hitting a mercury target. Not only are both
good sources for neutrons, they are also excellent neutrino sources with exceptional characteristics. An am-
bitious and growing fundamental neutron and neutrino science program is in operation at both the SNS and
HFIR. Both facilities will undergo major upgrades. A Second Target Station will be built at the SNS, driven
by a 2.8MW proton beam, and HFIR will be upgraded with a new pressure vessel and reflector. This provides
a unique and timely opportunity to explore the opportunities these upgraded facilities offer for a compelling
future fundamental physics program. The Physics Division invites the community to develop a strong syner-
gistic program.

Contribution Title

Presenters: DEMARTEAU, Marcel (Oak Ridge National Laboratory); DEMARTEAU, Marcel (Argonne National
Laboratory); DEMARTEAU, Marcellinus